

### ***EXAMINER'S AMENDMENT***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Matthew A. Pequignot (Reg. No. 44,362) on 25 February 2011.
3. The application has been amended as follows:

#### ***a. Amendment to the Claims :***

*The claims of this application have been amended as follow.*

1. (Previously Presented) A method for processing data events captured in a multi-protocol communications system, the method comprising:
  - capturing first data events at a first link analyzer, the first link analyzer being disposed in an in-line arrangement with respect to a first data stream corresponding to a first communication protocol;
  - capturing second data events at a second link analyzer, the second link analyzer being disposed in an in-line arrangement with respect to a second data stream corresponding to a second communication protocol that is different from the first

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communication protocol;

generating a clock at the first link analyzer;

timestamping the first data events with timestamps using the clock as a reference;

propagating the clock from the first link analyzer to the second link analyzer;

timestamping the second data events with timestamps using the propagated clock as a reference;

sorting at least some of the first captured data events with respect to at least some of the second captured data events according to the respective clock timestamps associated with each of the first and second captured data events; and

displaying at least some of the sorted data events by way of a graphical user interface.

2.(Canceled)

3.( Currently Amended) The method as recited in claim 1, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and [[,]] PCI Express.

4. (Currently Amended) The method as recited in claim 1, wherein the clock is one of: a reference clock; and [[,]] a protocol clock.

5.(Original) The method as recited in claim 1, wherein the displayed data events are presented on the graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

6.( Currently Amended) The method as recited in claim 5, wherein the temporal relationship comprises one of the following: a first data event preceded by a second data event; a first data event followed by a second data event; a first data event overlapped by a second data event; and [[,]] a first data event and second data event commenced simultaneously and also concluded simultaneously.

7.(Original) The method as recited in claim 5, further comprising using information concerning the temporal relationship to facilitate determination of whether or not a causal relationship exists between the at least two sorted data events.

8.( Currently Amended) The method as recited in claim 1, further comprising displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and [[,]] a protocol type.

9. (Previously Presented) A method for processing data events associated

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with a multi-protocol communications system, the method being suitable for use in connection with a multi-link protocol analyzer and comprising:

- capturing first data events at a first link analyzer, the first link analyzer being disposed in an in-line arrangement with respect to a first data stream corresponding to a first communication protocol;

- capturing second data events at a second link analyzer, the second link analyzer being disposed in an in-line arrangement with respect to a second data stream corresponding to a second communication protocol that is different from the first communication protocol;

- generating a clock at the first link analyzer;

- timestamping the first data events with timestamps using the clock as a reference;

- propagating the clock from the first link analyzer to the second link analyzer;

- timestamping the second data events with timestamps using the propagated clock as a reference;

- sorting at least some of the first captured data events with respect to at least some of the second captured data events according to the respective clock timestamps associated with each of the first and second captured data events; and

- displaying at least some of the sorted data events by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

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10. (Currently Amended) The method as recited in claim 9, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and [[,]] PCI Express.

11. (Currently Amended) The method as recited in claim 9, wherein the clock is one of: a reference clock; and [[,]] a protocol clock.

12. (Currently Amended) The method as recited in claim 9, wherein the temporal relationship comprises one of the following: a first data event preceded by a second data event; a first data event followed by a second data event; a first data event overlapped by a second data event; and [[,]] a first data event and second data event commenced simultaneously and also concluded simultaneously.

13. (Previously Presented) The method as recited in claim 9, further comprising determining whether a causal relationship exists between at least two displayed data events based upon the temporal relation between the at least two displayed data events.

14. (Currently Amended) The method as recited in claim 9, further comprising displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop

time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and [[,]] a protocol type.

15. (Currently Amended) A method for processing data events associated with a multi-protocol communications system, the method being suitable for use in connection with a multi-link protocol analyzer and comprising:

capturing first data events at a first link analyzer, the first link analyzer being disposed in an in-line arrangement with respect to a first data stream corresponding to a first communication protocol;

capturing second data events at a second link analyzer, the second link analyzer being disposed in an in-line arrangement with respect to a second data stream corresponding to a second communication protocol that is different from the first communication protocol;

capturing third data events at a third link analyzer, the third link analyzer being disposed in an in-line arrangement with respect to a third data stream corresponding to a third communication protocol that is different from the first and second communication protocols;

generating a clock at the first link analyzer;

propagating the clock from the first link analyzer to the second and third link analyzers;

timestamping the first, second, and third data events with timestamps using the clock propagated from the first link analyzer as a reference;

sorting at least some of the captured first captured data events with respect to at least some of the second data events according to the respective clock timestamps associated with each of the first and second captured data events; and

displaying the sorted data events in [[the]] a display by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

16. (Currently Amended) The method as recited in claim 15, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and [[,]] PC1 Express.

17. (Currently Amended) The method as recited in claim 15, wherein the clock is one of: a reference clock; and [[,]] a protocol clock.

18. (Previously Presented) The method as recited in claim 15, wherein the temporal relationship comprises one of the following: a first data event preceded by a second data event; a first data event followed by a second data event; a first data event overlapped by a second data event; and, a first data event and second data event commenced simultaneously and also concluded simultaneously.

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19. (Previously Presented) The method as recited in claim 15, further comprising determining whether a causal relationship exists between at least two displayed data events based upon the temporal relation between the at least two displayed data events.

20. (Currently Amended) The method as recited in claim 15, further comprising displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and [[,]] a protocol type.

21. (Currently Amended) A computer program product for implementing a method for processing data events captured in a multi-protocol communications system, the computer program product comprising:

physical storage computer readable medium ~~carrying~~ storing computer executable instructions for performing the method, wherein the method comprises:

capturing first data events at a first link analyzer from a data stream corresponding to a first communication protocol;

capturing second data events at a second link analyzer from a data stream corresponding to a second communication protocol that is different from the first communication protocol;



timestamping the first data events with timestamps using a clock generated at the first link analyzer as a reference;

timestamping the second data events with timestamps using the clock generated at the first link analyzer as a reference;

sorting at least some of the captured first captured data events with respect to at least some of the second data events according to the respective clock timestamps associated with each of the captured first and second data events; and

displaying at least some of the sorted data events by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

22. (Currently Amended) The computer program product as recited in claim 21, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and [[, ]]PCI Express.

23. (Currently Amended) The computer program product as recited in claim 21, wherein the clock is one of: a reference clock; and [[,]] a protocol clock.

24. (Previously Presented) The computer program product as recited in claim 21, wherein the temporal relationship comprises one of the following: a first data event preceded by a second data event; a first data event followed by a second data event; a

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first data event overlapped by a second data event; and, a first data event and second data event commenced simultaneously and also concluded simultaneously.

25. (Previously Presented) The computer program product as recited in claim 21, wherein the method further comprises determining whether a causal relationship exists between at least two displayed data events based upon the temporal relation between the at least two displayed data events.

26. (Previously Presented) The computer program product as recited in claim 21, wherein the method further comprises displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and, a protocol type.

27. (Previously Presented) The method as recited in claim 15, wherein the clock is propagated in series from the first link analyzer to the second link analyzer and from the second link analyzer to the third link analyzer.

28. (Previously Presented) The method as recited in claim 15, wherein the clock is propagated in parallel from the first link analyzer to the second and third link analyzers.

***Allowable Subject Matter***

4. Claims **1 and 3-28** are allowed.

5. The following is an examiner's statement of reasons for allowance:

Interpreting the claims in light of the specification, Examiner finds the claimed invention is patentably distinct from the prior art of record.

The prior art does not expressly teach or render obvious the invention as recited in independent **Claims 1, 9, 15 and 21**.

The features "capturing second data events at a second link analyzer, the second link analyzer being disposed in an in-line arrangement with respect to a second data stream corresponding to a second communication protocol that is different from the first communication protocol; generating a clock at the first link analyzer; timestamping the first data events with timestamps using the clock as a reference; propagating the clock from the first link analyzer to the second link analyzer; timestamping the second data events with timestamps using the propagated clock as a reference; sorting at least some of the first captured data events with respect to at least some of the second captured data events according to the respective clock timestamps associated with each of the first and second captured data events; and displaying at least some of the sorted data events by way of a graphical user interface", when taken in the context of the claims as a whole, was not uncovered in the prior art teachings.

Dependent claims **3-8, 10-14, 16-20 and 22-28** are allowed as they depend upon allowable independent claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdou Karim Seye whose telephone number is 571-270-1062. The examiner can normally be reached on Monday - Friday 8:30 - 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Soug Hyung can be reached on (571)272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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